

Serial No. 09/899,067
Amdt. dated August 25, 2004
Reply to Office Action of February 25, 2004

Docket No. K-277

REMARKS/ARGUMENTS

Claims 1, 4-6, 7-8, 10-14, 35, 38-40 and 48-83 are pending. By this Reply, the specification, claims 1, 7, 10-14, and 35 are amended, new claims 48-83 are added, and claims 2-3, 9, 15-34, 36, 37, and 41-47 are cancelled.

Further, the specification has been amended to correct minor informalities. The support for the amendment on paragraph 66 can be found in paragraph 21 of the original specification, and the original claims.

Claims 1, 2, 9, 15-20, 26-28 and 41 were rejected under 35 U.S.C. § 103(a) as unpatentable over Blakeney et al. (US Patent No. 5,640,414) in view of Fredrik et al (WO99/60809); claims 3, 7 and 42 were rejected under 35 U.S.C. § 103(a) as unpatentable over Blakeney in view of Fredrik and Lin (US Patent No. 6,542,744); and claims 21-25, 29, 30, 33-36, 38-40, 43 and 45-47 were rejected under 35 U.S.C. § 103(a) as unpatentable over Blakeney in view of Fredrik, Lin and Yi (US Patent No. 5,978,365). Claims 4-6, 8, 10-14, 31, 37 and 44 stand objected to, but are indicated as allowable.

The rejection for claims 9, 15-31 and 41-47 are moot since those claims have been cancelled. The rejection of claims 35 and 38-40 is also moot since the subject matter of objected claims has been incorporated, and objected claims 10-14 have been also rewritten into independent form.

Although there are multiple rejections, the main rejection that seems applicable to the claims is the rejection based on the combination of Blakeney, Fredrik, Lin and Yi. This main rejection will be address in order to narrow the issues of this reply and if this rejection is

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overcome, all rejections are overcome. This rejection is respectfully traversed to the extent it may be applicable to amended independent claims 1 and 35 and new claims 48-83.

The combination of the four references fails to establish a prima facie case of obviousness, as required under Section 103. As the Patent Office may be aware, the claimed invention is directed to handoff. A non-claim limiting explanation of code combination handoff is provided in the specification. As discussed in the specification with reference to Figure 2, if the mobile terminal 205 in a handoff region 220 moves to the a handoff region of the A base station 201 and the C base station 203, the signal of the B base station 202 is dropped, and the mobile terminal 205 receives the signals from the A base station 201 and the C base station 203. Since both the A base station 201 and the C base station 203 can use the code pattern α (or turbo encoder type or puncturing pattern), the gain of the CSH handoff method cannot be obtained (see page 9, paragraph [31]).

The outstanding Office Action recognizes Blakeney does not teach changing the code patterns as claimed and relies on Fredrik as teaching this feature. However, it is respectfully noted Fredrik merely teaches using codes from another code set when the codes from a first code set are exhausted. That is, Fredrik uses codes from a same set for all mobile stations because there is less correlation between codes in a same code set than codes of different code sets, and then when there are no more codes in the first code set, Fredrik uses codes from a second code set but allocates the codes from the second set to antennas having less correlation (e.g., antennas on opposite sides).

In more detail, Fig. 5 illustrates that Fredrik determines the location of a mobile cell to

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determine which code from a code set to use (see also Figs. 7A and 7B). That is, as shown in Fig. 7A, for example, the mobile terminal 310 uses a code from a first code set (code set #1) and the mobile terminal 330 uses a code from a second code set (code set #2). Fig. 7B illustrates 3 different code sets being used. In addition, Fig. 7C of Fredrik illustrates the mobile terminal 330 moving from the code set 3 (see Fig. 7B) to a geographical location including a code from a code set #2 and in which the mobile terminal 330 begins to use the code from the code set #2.

However, Fredrik does not relate to a code pattern, a turbo encoder type, puncturing pattern type, or encoder output, and the combinations thereof during handoff, as recited in the claims. The code set described in does not relate to the features recited in the claims since the code set of Fredrik relates to spreading codes used within a cell. Further, there would be no suggestion to change the code pattern, the turbo encoder type, puncturing pattern type or encoder output of two base stations, as recited in the claims. The spreading code used by each mobile terminal within a cell are not allowed to be the same under network design, which is the reason why the base station uses a code set from another cell before the code set of the current cell is exhausted.

The Patent Office relies upon a limited disclosure of Lin in regard to TIA/EIA/IS-2000.5, March 2000 to conclude that the use of the field and/or indicator in the Universal Handoff Direction Message to be obvious. However, a full appreciation of such hindsight teaching can be obtain when the TIA document is reviewed. Subsequent to the filing of this Reply, Applicant's representative is submitting this document in an Information Disclosure Statement. As shown therein, Lin incorrectly identifies the document since "Introduction for

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cdma2000 Standards for Spread Spectrum Systems" is actually TIA/EIA/IS-2000.1-A, March 2000, whereas TIA/EIA/IS-2000.5, March 2000, corresponds to "Upper Layer (Layer 3) Signaling Standard for cdma2000 Standards for Spread Spectrum Systems" (hereinafter "Layer 3 Standard")

The Layer 3 Standard document is well over 1400 pages of description. As can be appreciated, there are other messages disclosed in this document, which are numerous, and it would be impermissible hindsight to conclude that claimed field and/or indicator would be used in the Universal Handoff Direction Message when other messages could have been used. Further, this document does not contemplate the use of such a message to allow change in the code pattern, a turbo encoder type, puncturing pattern type, or encoder output during handoff.

Further, Yi would not suggest the features of the claimed invention. Specifically, Yi already uses different puncturing pattern, as illustrated in Figures 7 and 15. Hence, there would be no need to change such puncturing pattern and the disclosure therein would not render obvious the claimed invention.

It is respectfully requested that the combination of the references, in its entirety or in part, cannot suggest the claimed invention, and withdrawal of this rejection is respectfully requested.

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CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, Daniel Y.J. Kim, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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